U.S. Serial No.: 10/621,027 Filed : July 16, 2003

: 3

148. (Canceled)

SEP 0 7 2006

AMENDMENTS

- 149. (Currently amended) A composition for achieving a synergistic therapeutic effect in a mammal in need thereof, comprising:
 - (a) a glucan, the backbone of which comprises comprising a backbone having—1,3-beta linkages; and
 - (b) <u>a an</u> antibody administered to a mammal and is effective against cancer or tumor cells,

wherein the synergistic therapeutic effect is the eradication or suppression of cancer or tumor cells; wherein the glucan is orally administered to said mammal; wherein the glucan is co-administered or administered concurrently with the antibody to said mammal; and wherein the efficacy of the antibodies to eradicate or suppress cancer or tumor cells is synergistically enhanced by the orally administered glucan.

- 150. (Previously presented) The composition of claim 149, wherein the antibody is a monoclonal antibody or a tumor-binding antibody.
- 151. (Previously presented) The composition of claim 150, wherein the antibody is capable of activating complement.
- 152. (Previously presented) The composition of claim 151, the antibody is further capable of activating the antibody dependent cell-mediated cytotoxicity.
- 153. (Previously presented) The composition of claim 150, wherein the antibody is directed at HER-1 (epidermal growth factor receptor) or directed to a ganglioside.

U.S. Serial No.: 10/621,027 Filed : July 16, 2003

Page : 4

154. (Previously presented) The composition of claim 153, wherein the ganglioside is GD2 or GD3.

- . 155. (Currently amended) The composition of claim 150, wherein the antibody binds to the antigen is—CD20 or CD22 or HER-2/neu or CD25.
 - 156. (Previously presented) The composition of claim 149, wherein the cancer is neuroblastoma, melanoma, non-Hodgkin's lymphoma, Epstein-Barr related lymphoma, Hodgkin's lymphoma, retinoblastoma, small cell lung cancer, brain tumors, leukemia, epidermoid carcinoma, prostate cancer, renal cell carcinoma, transitional cell carcinoma, breast cancer, ovarian cancer, lung cancer, colon cancer, liver cancer, stomach cancer, or other gastrointestinal cancers.
 - 157. (Previously presented) The composition of claim 149 and a pharmaceutically acceptable carrier.
 - 158. (Previously presented) The composition of claim 149, wherein the glucan is of high molecular weight, or wherein the molecular weight of the glucan is between 250,000 to 450,000 Daltons.
 - 159. (Previously presented) The composition of claim 149, wherein the glucan derived from barley, oat, wheat, moss or yeast.
 - 160. (Previously presented) The composition of claim 149, wherein the glucan is stable to heat treatment.
 - 161. (Previously presented) The composition of claim 160, wherein the composition is stable after boiling for 3 hours.

U.S. Serial No.: 10/621,027 Filed : July 16, 2003

Page : 5

162. (Previously presented) The composition of claim 149, wherein the amount is about > = 25 mg/kg/day, five days a week for a total of 2-4 weeks.

- 163. (Previously presented) The composition of claim 149, wherein the backbone further comprises 1,4-beta linkages.
- 164. (Previously presented) The composition of claim 149, wherein the glucan further comprises at least one side chain having 1,3-beta linkages.
- 165. (Previously presented) The composition of claim 164, wherein the gluan further comprises at least one side chain having 1,6-beta linkages.
- 166. (Previously presented) The composition of claim 164, wherein the side chain is linked to the backbone by a 1,6-beta-linkage.
- 167. (Previously presented) The composition of claim 165, wherein the side chain is linked to the backbone by a 1,6-beta-linkage.
- 168. (Previously presented) A composition comprising a glucan, wherein the glucan is administered by oral route, in an amount wherein the glucan and an antibody administered to a subject have synergistic effect, wherein the glucan comprises $1,3-\beta$ and $1,4-\beta$ -linkages in the backbone, and wherein the molecular weight of the glucan ranges from 250,000 to 450,000 Daltons.
- 169. (Previously presented) The composition of claim 168, wherein the antibody is a monoclonal antibody.

U.S. Serial No.: 10/621,027 Filed : July 16, 2003

Page : 6

170. (Previously presented) The composition of claim 168, wherein the antibody is an antibody against cancer.

- 171. (Previously presented) The composition of claim 170, wherein the antibody is a tumor-binding antibody.
- 172. (Previously presented) The composition of claim 171, wherein the antibody is capable of activating complement.
- 173. (Previously presented) The composition of claim 172, the antibody is further capable of activating the antibody dependent cell-mediated cytotoxicity.
- 174. (Previously presented) The composition of claim 171, wherein the antibody is directed at HER-1 (epidermal growth factor receptor).
- 175. (Previously presented) The composition of claim 171, wherein the antibody is directed to a ganglioside.
- 176. (Previously presented) The composition of claim 175, wherein the ganglioside is GD2.or GD3.
- 177. (Previously presented) The composition of claim 171, wherein the antigen is CD20 or CD22.
- 178. (Previously presented) The composition of claim 171, wherein the antigen is HER-2/neu.
- 179. (Previously presented) The composition of claim 171, wherein the antigen is CD25.

U.S. Serial No.: 10/621,027 Filed : July 16, 2003

Page: 7

180. (Previously presented) The composition of claim 170, wherein the cancer is neuroblastoma, melanoma, non-Hodgkin's lymphoma, Epstein-Barr related lymphoma, Hodgkin's lymphoma, retinoblastoma, small cell lung cancer, brain tumors, leukemia, epidermoid carcinoma, prostate cancer, renal cell carcinoma, transitional cell carcinoma, breast cancer, ovarian cancer, lung cancer, colon cancer, liver cancer, stomach cancer, or other gastrointestinal cancers.

- 181. (Previously presented) The composition of. claim 168 and a pharmaceutically acceptable carrier.
- 182. (Previously presented) The composition of claim 168, wherein the glucan is of high molecular weight.
- 183. (Previously presented) The composition of claim 168, wherein the glucan is derived from. barley, oat, wheat, moss or yeast.
- 184. (Previously presented) The composition of claim 168, wherein the glucan is stable to heat treatment.
- 185. (Previously presented) The composition of claim 184, wherein the composition is stable after boiling for 3 hours.
- 186. (Previously presented) The composition of claim 168, wherein the glucan further comprises 1,6- β side chain.
- 187. (Previously presented) The composition of claim 168, wherein the effective dose is about >= 25 mg/kg/day, five days a week for a total of 2-4 weeks.

U.S. Serial No.: 10/621,027 Filed : July 16, 2003

Page : 8

188. (Previously presented) The composition of claim 168, wherein the glucan and the antibody are administered concurrently.

- 189. (New) An immunotherapeutic anti-cancer composition comprising at least two synergistically acting components comprising:
 - (a) an orally administered glucan comprising β -(1,3)linkages, in an amount effective to activate macrophages in vivo, and
 - (b) an antibody raised against a molecular determinant present on a cancer cell in an amount to effectively bind to the cancer cell in vivo,

wherein the glucan and the antibody act synergistically in reducing tumor growth.

- 190. (New) The composition of claim 189 wherein the glucan has a molecular weight of at least about 40 Kd.
- 191. (New) The composition of claim 189 wherein the glucan has a molecular weight between approximately 40 Kd and approximately 500 Kd.
- 192. (New) The composition of claim 189 wherein the antibody can activate complement.